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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/613,948	07/07/2003	Robert Bruce Steinert		6810
37498	7590	06/20/2005		
ROBERT B. STEINERT 32 VILLAGE WAY NORTH BRANCH, NJ 08876			EXAMINER MUROMOTO JR, ROBERT H	
			ART UNIT 3765	PAPER NUMBER
DATE MAILED: 06/20/2005				

Please find below and/or attached an Office communication concerning this application or proceeding:

## Office Action Summary

Application No.

10/613,948

Applicant(s)

STEINERT, ROBERT BRUCE

Examiner

Robert H. Muromoto, Jr.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 July 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Specification*

The abstract of the disclosure is objected to because the abstract of the disclosure does not commence on a separate sheet in accordance with 37 CFR 1.52(b)(4). A new abstract of the disclosure is required and must be presented on a separate sheet, apart from any other text.

Correction is required. See MPEP § 608.01(b).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-9, 15, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moretti US patent 4,271,833 in view of Anderson et al., US patent 6,415,453.

Moretti teaches a ventilative system for protective clothing of the type including a head enclosure 12 and an outer covering 14 for a user's body.

Further, Moretti teaches, "The head enclosure 12 may be, for example, in the form of a flexible hood, as herein illustrated, or in the form of a rigid helmet. The head enclosure 12, in general, may be as disclosed by U.S. Pat. No. 4,052,984.

The outer covering 14 may take the form of coveralls, such as are herein

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illustrated, and may be formed of materials which are either air permeable or air impermeable. The head enclosure 12 and outer covering 14 are preferably separate items of the protective covering. The outer covering 14 may be gathered about the user's ankles and wrists, but will allow escape of interior air therefrom. The outer covering 14 will normally be exterior an inner covering 16, or overalls, the ventilating system 10 being substantially disposed there between. The protective clothing may be completed by gloves 18 and boots (not shown). (col. 2, lines 45-61)"

The underlined citations are of particular interest and clearly teach the limitations of claims 2-4, and 6. The limitations in claim 5 are inherent to any air permeable material as taught above because an air permeable material will have some filtration properties depending on the size of particulates that are present.

With respect to claims 15 and 18, Moretti teaches, "The ventilating system may include a head protective covering and a manifold. The manifold has an air inlet and a plurality of air outlets. The air outlets include a first air outlet and a plurality of second air outlets. The first air outlet is connectable to the head protective enclosure and is of a construction sufficient, with respect to the air inlet and second air outlets, to deliver pressurized air within a predetermined range of air volume per unit time therefrom regardless of the air flow through the second air outlets when the air inlet is connected to a source of pressurized air within a predetermined pressure range (col. 2, lines 6-18)."

The head enclosure alluded to earlier in patent 4,052,984 includes a sight shield and the air ports and valves taught are equivalent to the limitations in claims 15 and 18.

Although Moretti has taught essentially all of the limitations of the claims listed, Moretti does not teach using the user's breathing as the pressurized air source. Nor does Moretti teach the limitations recited in claims 7 and 8.

However, Anderson '453 does teach a garment that utilizes the wearer's exhalant as a low energy, lightweight (due to the lack of a powered air supply) air supply means.

Anderson teaches, "The respiratory system of the garment 6 consists of a first stage and second stage. The first stage of the garment 6 is a mask that covers the nose and mouth, FIG. 3. It utilizes check valves 9 to separate inhaled and exhaled gases. The first stage controls the flow, separation, and redirection of inhaled and exhaled gases. An inlet port 10 allows air to be supplied by the environment or serve as a connection point for a contained supply of air. During inhalation, the check valve 9 allows air from the environment or pressured air (oxygen) supply to enter the breathing space 11 through the garment's 6 air supply tube 7. During exhalation the other check valves 9 shunt the expired gasses into the second stage. The mask is designed with two safety mechanisms; a redundant air supply connection 13 and a pressure relief valve 15 in case of abnormally high second stage pressures. The inner surface of the mask is also designed to promote water condensation and evaporation. This will be discussed later in the water recycling section. The second stage is the internal flow network of the

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garment 6, through which the exhaled gases flow, sectionally illustrated in FIG. 2. The second stage has three primary layers that serve to transfer heat from the internal flow of exhalants to the skin and prevent heat loss to the environment (FIG. 2). The layer closest to the skin contains the constantly flowing exhaled mixture of gases. The gases flow within these interconnected, flexible, polymer bladders 18, whose flow path extends from the head to the hands and feet. As the gas exits the first stage, it travels through tubes 19 over the head, and down into the upper body section. The tubes 19 then branch off into a network of bladders 18 encompassing the arms, back, abdomen, and legs. The gas bladder 18 network has a constant re-supply of exhaled gases, a product of the human respiratory process. The construction of the inner gas flow network promotes the free flow of gasses throughout the garment 6, heating the maximum dermal area. Its cancellous structure, consisting of long bladders 18 with intermittently perforated walls 20, facilitates airflow, while resisting permanent compression (col. 4, line 38-col. 5, line 8).

The safety mechanism valve taught by Anderson teaches the limitations of claim 7.

The long bladders 18 as taught by Anderson provide the support and resistance to negative pressure (permanent compression) as recited in claims 8 and 9.

Therefore it would have been obvious to modify the ventilation suit of Moretti to use the teachings from Anderson to use an air supply pressurized only by the user's exhalant to reduce the energy requirements and increase user comfort through the

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weight reduction of not needing an additional powered air source for the ventilated garment.

Claims 10-13, 16, 17, 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morreti in view of Anderson as applied to claims listed above, and further in view of Montesi US patent 4,630,604.

Although the combined teachings above teach essentially all of the limitations of the instant invention, they do not teach the use of a filter material on the air inlets of the suit to provide clean air to the user.

However, the use of filters, either permanent or replaceable, on air valves, masks, and vents to provide clean air is widely practiced and cannot be considered a novel limitation.

As evidence, the examiner has cited Montesi '604. '604 teaches in the background of the invention that in its simplest form known dust masks that filter material is attached to a face piece and extended over a person's mouth and nose to provide clean air to the user. This arrangement could be considered a permanent attachment of the filter material to the apparatus because once the filter material is completely clogged the whole item must be thrown away.

'604 further teaches a filter assembly, including an inhalation valve 34 that incorporates a replaceable filter material to provide the user with clean air.

Therefore it would have been obvious to modify the combined teachings of Moretti and Anderson to include either a permanent or replaceable filter material over any air inlets to provide the user with clean air.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Morreti in view of Anderson and further in view of Montesi as applied to claims listed above, and further in view of Foster.

The combined teachings listed above teach essentially all of the limitations of the instant invention except for the use of a shielding means to prevent the entry of liquids such as rain into the ventilated garment.

However, Foster does teach garment ventilation apertures (vents) with a cover flap. The flaps are used in waterproof garments to protect the apertures (open vents) of the garment from rain ensuring the water-proofness of the garment while still providing ventilation to the garment.

Therefore it would have been obvious to one of ordinary skill in the art to modify the combined teachings above to include a flap covering the air vents to protect them from falling liquids such as rain.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Morreti in view of Andersón, Montesi, and further in view of Foster as applied to claims listed above, and further in view of Tiano.

Although the combined teachings above teach essentially all of the limitations of the instant invention, they do not teach the use of vents in the face shield to prevent the shield from fogging.

However, anti-fogging ventilation is not inventive. As evidence, the examiner has cited Tiano '833. Tiano teaches sporting eyeglasses that use vents all around vision shield to keep the lenses from fogging and disrupting the visual capacity of the user.



Therefore it would have been obvious to one ordinary skill in the art at the time of invention to use vents on the face shield of a mask to prevent fogging of the face shield.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ventilation suits and masks have been cited.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert H. Muromoto, Jr. whose telephone number is 571-272-4991. The examiner can normally be reached on 8-530, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Calvert can be reached on 703-305-1025. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Bhm  
June 14, 2005

  
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